Eyecare Emergencies

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1

Financial Disclosures

- Educational symposium presenter
  - Neurotrophic Keratopathy
    - Dompe, 2024
  - Geographic Atrophy
    - Iveric Bio, 2023
- Speaker
  - Alcon, 2025
- Advisory board member
  - Dompe, 2025
  - Alcon, 2024
  - Bausch & Lomb, 2023 & 2024
  - Tarsus, 2022
  - Oyster Point, 2022
- All relevant relationships have been mitigated

2

A 5th Opinion

3

- 60 year old female
- CC: Progressive painless vision loss OU x 2 months

- Medical history:
  - Resected meningioma x2
  - Atrial fibrillation
  - Ovarian cancer s/p hysterectomy (age 36)
  - Renal calculi

4

A little more detail…

- Hx meningioma s/p craniotomy and resection of tumors 2013 and 2023
- Endorses:
  - Vision loss
  - Photophobia
  - Headaches
    - Can be very intense and now wake her from sleep
- Has seen:
  - An optometrist
  - A neurologist (r/o IIH, thought could be due to flecainide, sent to cardiologist)
  - Her cardiologist
  - Her neurosurgeon
  - Referred to see a neuro-ophthalmologist, currently awaiting appointment in 2 months

5

- MRI head w/wo contrast

- CT head w/wo contrast
  - 1 month prior = post surgical changes

- Lumbar puncture w/OP + CSF analysis
  - 2 weeks prior = normal CSF and opening pressure

6

Clinical Exam

- VAs 20/100 Ecc OD, 20/300 OS
- IOPs 16 / 18mmHg
- Pupils 5mm → 4mm OU, no APD
- EOMs full

- Color vision: 10/14 OD, 11/14 OS
  - *Missed the right number OD, missed left number OS*

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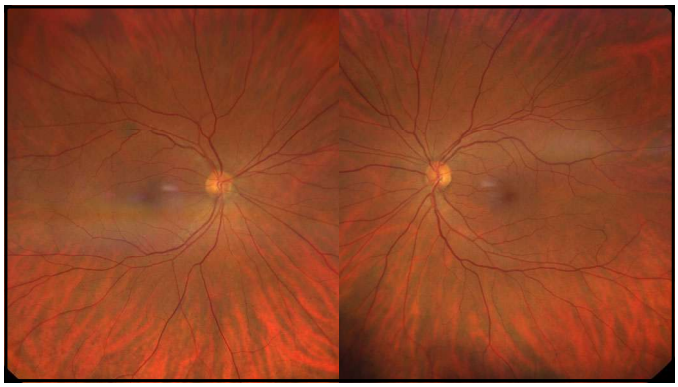

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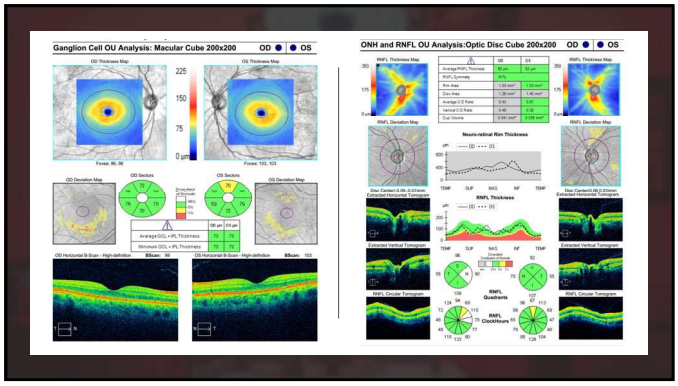

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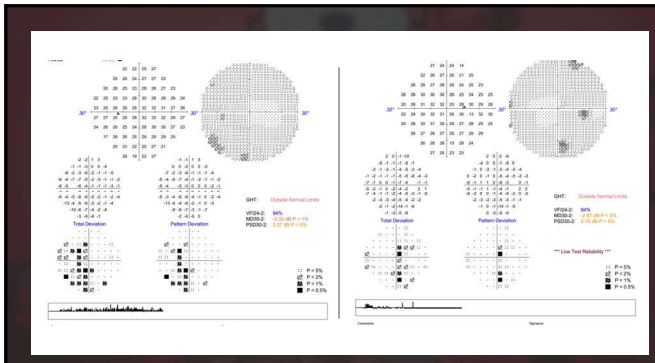

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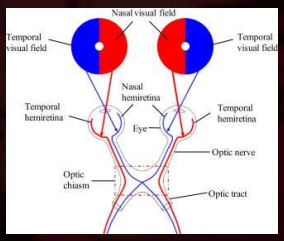
Bitemporal hemianopia

- Classic feature of chiasmal compression by sellar / suprasellar lesion

- Most common causes:
  - Pituitary adenoma
  - Meningioma
  - Craniopharyngioma



11

MRI brain and orbits w/wo

1. *Post surgical changes from meningioma resections*
2. *Cystic mass in the suprasellar region possibly arising from the pituitary stalk with a nodular enhancing component measuring up to 1.4 cm (previously 1.2 cm) and appears new since 2024*
3. *Associated mass effect on the optic chiasm resulting in superior displacement. No abnormal signal or enhancement involving the optic nerves*

12

Craniopharyngiomas

- Benign tumor
- Typically grows in close proximity to pituitary gland, optic chiasm
  - Visual field deficits are very common!
- Treatment may include surgical resection +/- post-surgical radiation
- Recurrence rates are high (20-60%)[1]
  - Aggressive tumor growth and adjacent vital structure making total resection difficult
  - Require serial monitoring for recurrence
  - Higher rates in children

Park HJ, Dho YS, Kim JH, Kim JW, Park CK, Kim YH. Recurrence Rate and Prognostic Factors for the Adult Craniopharyngiomas in Long-Term Follow-Up. World Neurosurg. 2020 Jan;133:e211-e217. doi: 10.1016/j.wneu.2019.08.209. Epub 2019 Sep 4. PMID: 31493596.

13

Outcome

- Patient was transferred to hospital for neurosurgical consultation
- Underwent transsphenoidal resection of craniopharyngioma
  - Noted improvement in vision, reduction in headaches

14

Case Closed

15

86 year old female loss of vision OD x 1 week

- Occurred after falling, hitting face/eye on the ground

- Med Hx
  - Hypertension, hyperlipidemia, vertigo, peripheral vascular disease, chronic kidney disease, deep vein thrombosis, pulmonary embolism, and polymyalgia rheumatica

- Oph Hx
  - Cataract surgery

16

16

Clinical Exam

- VAs CF 1ft OD, 20/40 OS
- IOPs 23/21 mmHg
- Pupils No APD (by reverse)
- EOMs Full, no diplopia

17

17

Right eye

- 90% hyphema
- Iridodialysis visible superiorly
- Corneal edema
- Superior perilimbal full-thickness conjunctival laceration
  - Seidel negative

- What now?

18

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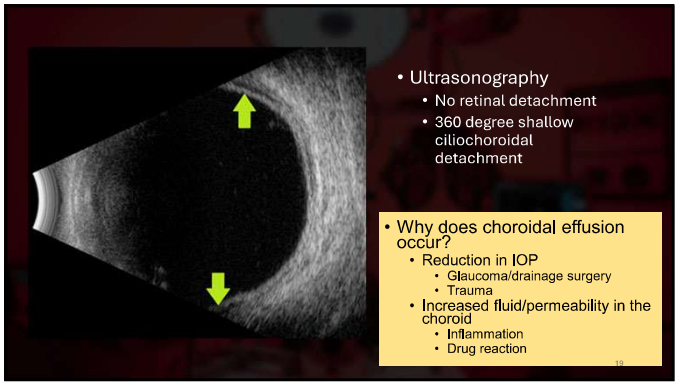

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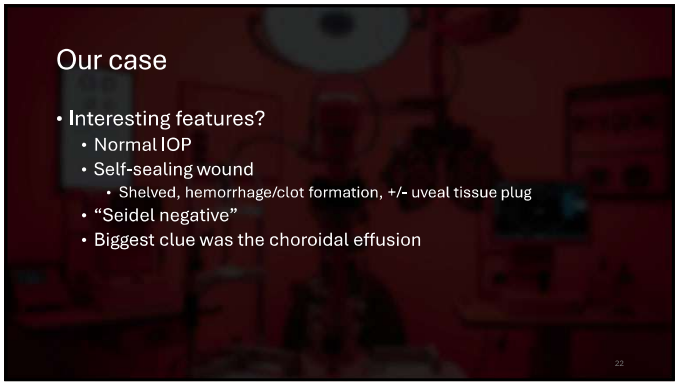

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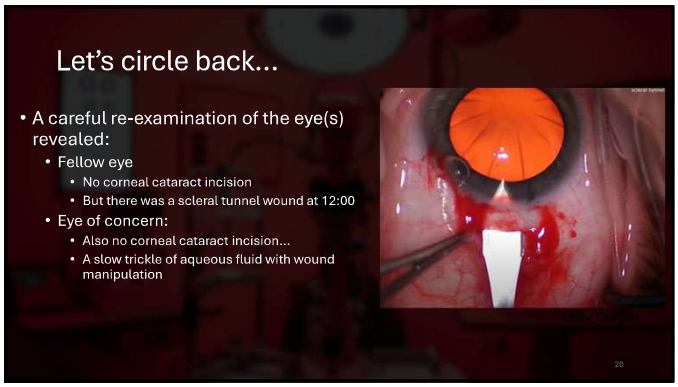

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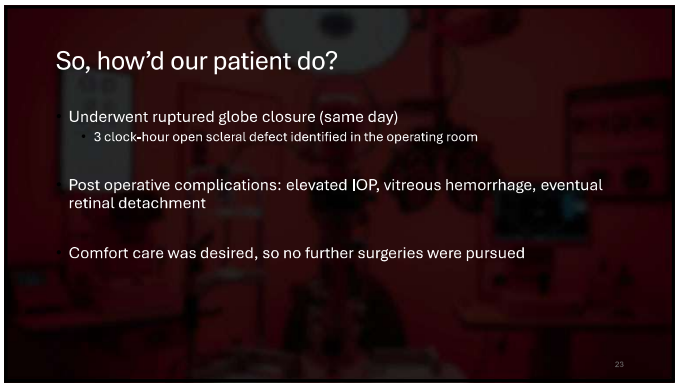

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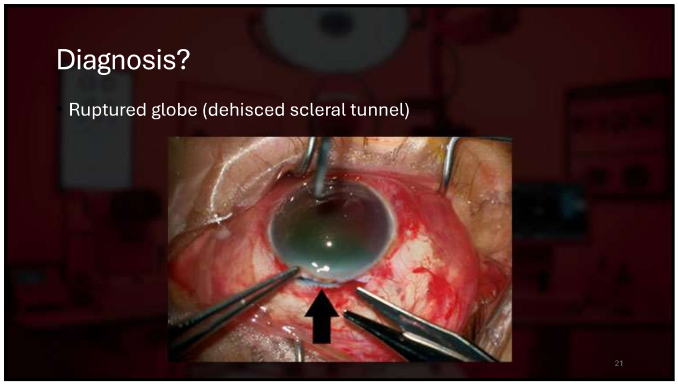

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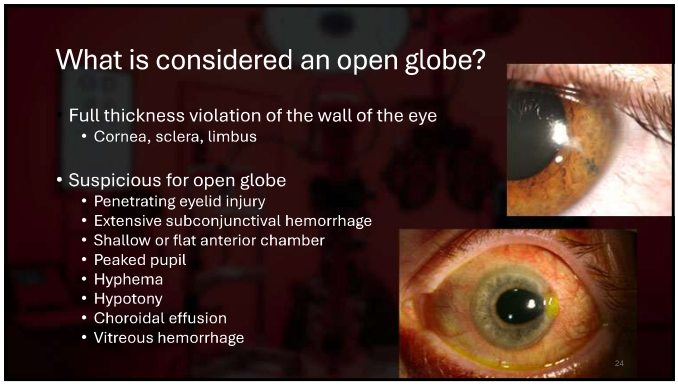


24

Type of injury	Entrance visual acuity	Pupillary reaction	Site of injury
Rupture: Full-thickness wound of the eye wall caused by a blunt object/trauma	**Grade 1:** 20/40 or better	No APD	**Zone I:** cornea
Penetrating: Single laceration of the eyewall, usually by something sharp	**Grade 2:** 20/50 to 20/200	APD	**Zone 2:** limbus to 5mm posteriorly
Perforating: Two full-thickness lacerations (entrance + exit) of the eyewall, usually caused by sharp object	**Grade 3:** >20/200 to Hand motion		**Zone 3:** >5mm posterior to limbus
Intraocular foreign body: Retained foreign object(s) causing entrance laceration(s)	**Grade 4:** Hand movement or light perception		
	Grade 5: no light perception		

25

25

What should you do in office?

This is considered an emergency!

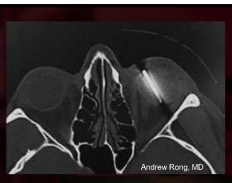
1. Examination to fully evaluate extent of ophthalmic trauma
2. Protect the globe and prepare
   - Place a hard shield
   - Instruct patient not to touch eye
   - Have patient stay upright
   - No food or fluids
3. Refer to…
   - Anterior segment surgeon
   - Vitreoretinal surgeon
   - Local ED with ophthalmology on call

26

26

What happens next?

- **Possible imaging**
  - Especially if an IOFB is suspected or confirmed
  - To rule in/out any orbital trauma
  - Usually CT orbits with 1mm cuts is preferred
- **Decrease risk of infection**
  - Assess tetanus status (metal/dirty injuries)
  - Topical antibiotics (ie vancomycin or moxifloxacin)
  - Possible systemic antibiotics (ie levofloxacin)
- **Surgery**
  - Medical clearance for anesthesia, "nil por os" / NPO (6+ hours)
  - Goal: get in and get out!
    - Remove any IOFB and close the globe
    - Often, the best outcome ultimately requires multiple steps/surgeries



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27

No Pain, No Gain

28

28

- 80 year old man with blurred vision, redness, and discharge x3 weeks OD
- Referred by local ophthalmology practice for corneal ulcer evaluation with culture

- Medical history
  - Squamous cell carcinoma right periocular/temporal area
    - Biopsy positive 2 months prior
    - S/p incomplete resection 1 month prior (positive margins)
      - Postsurgical CN 7 paralysis
    - Plan for radiation in 1 month
  - Diabetes, hypertension, hypercholesterolemia, prostate cancer s/p radiation, heart disease, s/p pacemaker

29

29

Clinical Exam

- VAs 20/400 OD, 20/30 OS
- IOPs 6 / 9mmHg
- Pupils No APD
- EOMs Reports no diplopia

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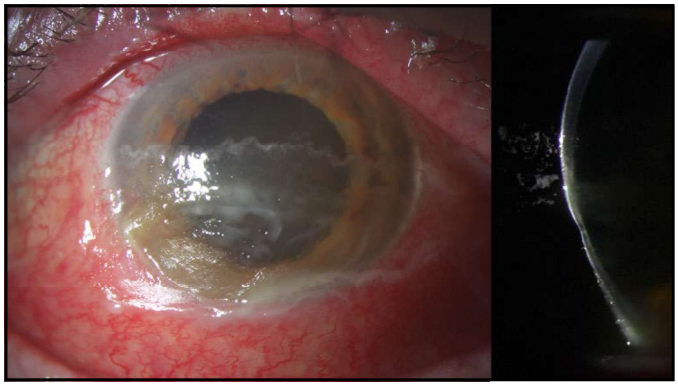

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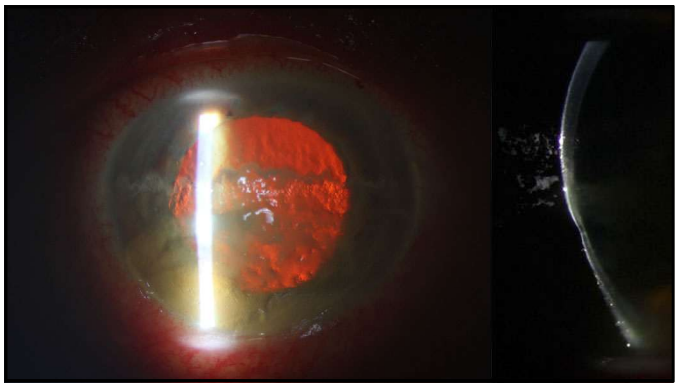

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35

Back up… and take in the full picture

33

What now?

- Proptosis
- Limited motilities (? CN6, CN3, CN4)
- Numbness (cornea and V2)

- Neuroimaging!
- MRI preferrable, but patient has pacemaker

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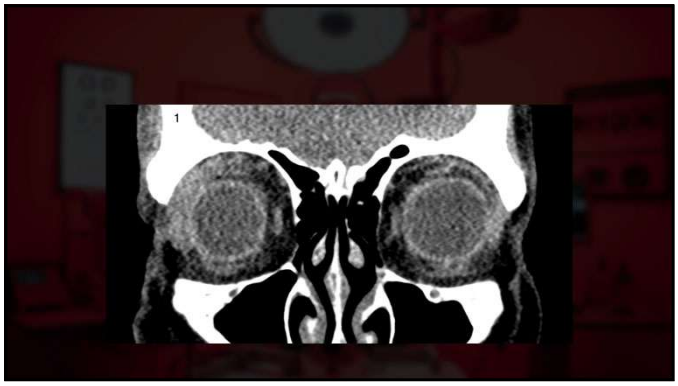

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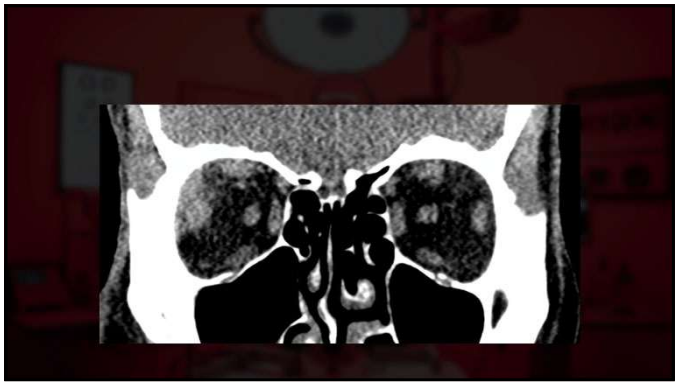

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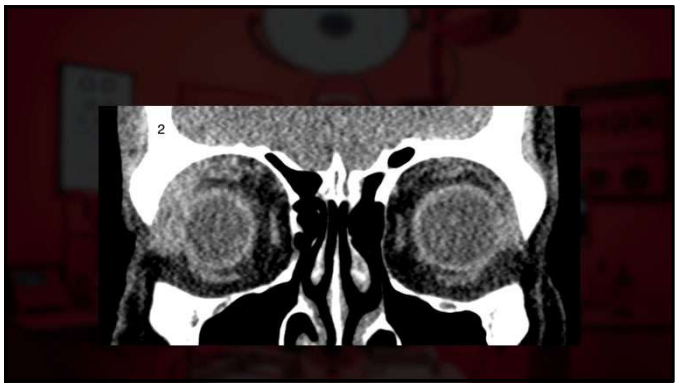

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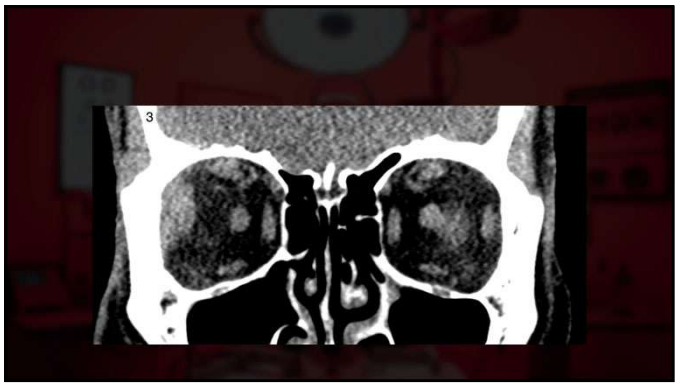

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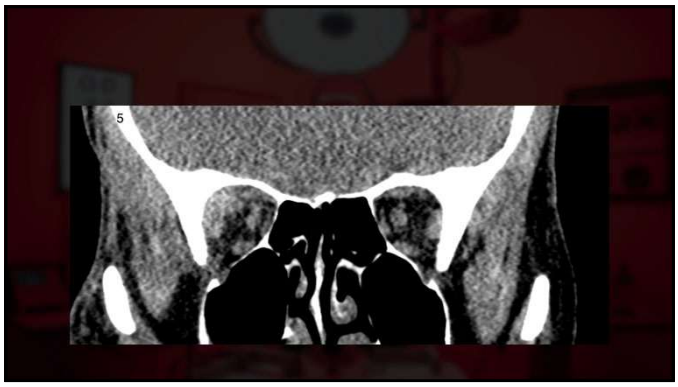

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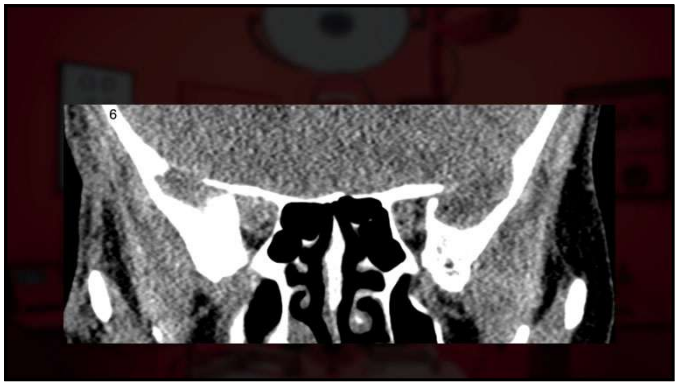


43

44

1. Enhancing soft tissue involving superior lateral extraconal fat of the right orbit inseparable from the superior muscle complex and right lateral rectus muscle with involvement of the right lacrimal gland extending posteriorly to the right orbital apex. There is effacement of the fat planes in the right inferior orbital fissure, pterygopalatine fossa, and right pterygomaxillary fissure. There is effacement of the right parapharyngeal fat planes. Findings are highly concerning for perineural tumor spread in this patient with a history of incompletely resected squamous cell carcinoma of the lateral canthus.
2. Right cavernous sinus suboptimally evaluated due to technique. There is suggestion of widening the right foramen rotundum. For further evaluation of disease extent at the skull base, suggest correlation with skull base MRI.
3. Additionally, there is asymmetric skin and subcutaneous soft tissue thickening of the right face and within the right parotid region with ill-defined enhancement involving the right parotid gland and extending into the subcutaneous soft tissue of the periauricular region. Findings may suggest perineural tumor spread or metastatic disease. There is a focal soft tissue in the preauricular region as described above which could represent a preauricular lymph node. Follow-up neck CT can be obtained to evaluate for metastatic lymphadenopathy.

45

Cutaneous squamous cell carcinoma

- Given the pattern of spread, concern high for perineural invasion (PNI)
- PNI occurs through a complex mechanism of tumor cells likely taking advantage of the unique environment surrounding nerves[1]
  - Generally, portends a poor prognostic factor
- Signs and symptoms of PNI
  - Numbness or tingling, pain, hyper/hypoesthesia, loss of function/paralysis

Chen SH, Zhang BY, Zhou B, Zhu CZ, Sun LQ, Feng YJ. Perineural invasion of cancer: a complex crosstalk between cells and molecules in the perineural niche. Am J Cancer Res. 2019 Jan 1;9(1):1-21. PMID: 30755808; PMCID: PMC6356921.

46

Management

- Corneal ulcer
  - Cultures taken (no growth)
  - Increased frequency of topical antibiotics + lubrication
    - Eventually switched to fortifieds due to increased infiltrate after tarsorrhaphy opened
  - Temporary partial tarsorrhaphy completed same day
- Squamous cell carcinoma
  - Results discussed with managing radiation oncologist
  - Referred to oculoplastics given local spread, seen within a few days
  - Case discussed at tumor board
    - Patient recommended to initiate immunotherapy

47

1 year later

- Maintained on immunotherapy, Libtayo (cemiplimab-rwlc)
- Tarsorrhaphy remains in place
  - No pain or discharge
  - (Despite patient request to take down lol)

48

Take aways

- Be thorough
- When things don't add up, you may be trying the wrong equation
- Don't assume someone is "already taken care of"

49

Case Closed

50

- 45 year old male
- CC: "eye infection" with redness and irritation OD x 2 months
  - Treated with tobramycin-dexamethasone gtts x 1 week (d/c 2 weeks prior)
- Medical history
  - Celecoxib for musculoskeletal pain

51

Clinical Exam

- VAs 20/20 OU
- IOPs 40 / 22 mmHg
- Pupils No APD
- EOMs Full

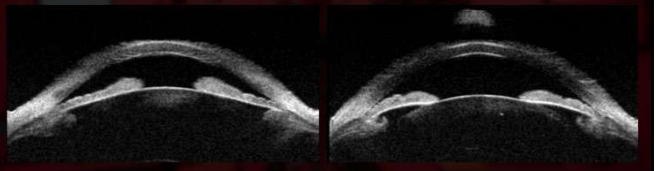
52

- Gonioscopy:
  - OD: no angle structures
  - OS: 180˚ anterior trabecular meshwork
- Spectacle Rx:
  - OD: +2.00D
  - OS: +3.00D
- Slit lamp
  - Mild conjunctival injection OD>OS
  - AC and vitreous quiet OU
  - CD: 0.8 OD, 0.4 OS

53

Ultrasound Biomicroscopy

Right eye Left eye



54

Management of acute angle closure

- Gonioscopy!!
  - Rule out other causes (ie neovascular glaucoma, inflammation, etc)
  - Compression gonio may break attack
- Medication review, especially in young patients
  - Topirimate, diuretics (acetazolamide, methazolamide), escitalopram

55

Management of acute angle closure

- Up to 3 rounds of topical IOP lowering drops, ~15 minutes apart
  - Combination of
    - Alpha agonist (ie: brimondine)
    - Beta blocker (ie: timolol)
    - Carbonic anhydrase inhibitors (ie: dorzolamide)
  - May add oral CAI (acetazolamide, two 250mg tablets at once)
    - Caution in sickle cell and kidney failure patients
  - Can consider pilocarpine 1%*
  - Goal: IOP under ~30 in office

56

Management of acute angle closure

- Get out of the woods first!
  - Maximize medical therapy
  - Additional options
    - AC tap
    - LPI
    - IV hyperosmotics
- Refer for surgical intervention
  - Laser peripheral iridotomy
  - Cataract / lens extraction

57

Corne-Ya? Corne-Oh No?

58

Case: Ulcer

- 21 year old female with redness, photophobia, significant pain and foreign body sensation x 1 day
  - Contact lens wearer (monthly disposable)
  - Denies sleeping, swimming, showering in lenses
  - She DID keep them in the same solution for a few weeks, though…

59

Clinical Exam

- VAs 20/40 OD, 20/60 OS sc
- IOPs 14 / 16mmHg
- Pupils Normal, no APD
- EOMs Full

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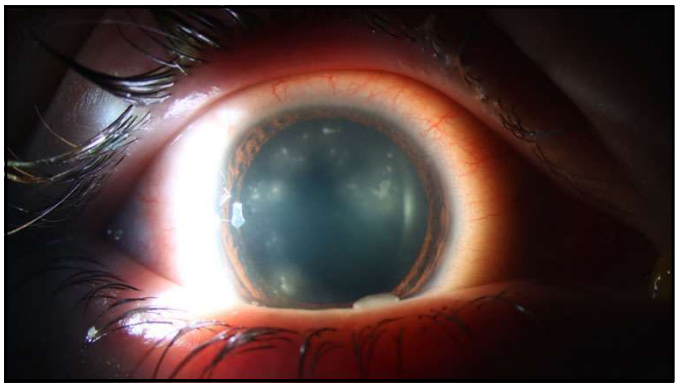

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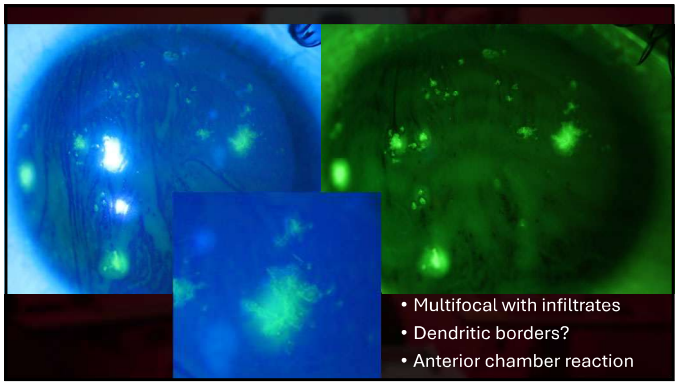

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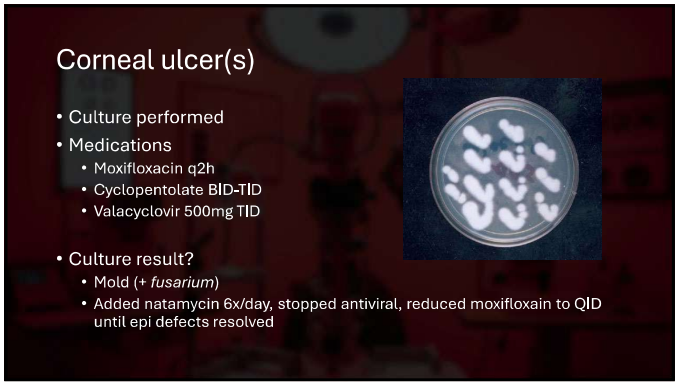

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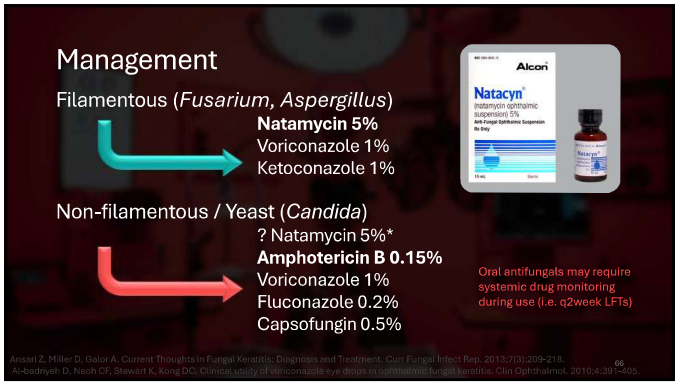


66

Tattoo Induced Uveitis

67

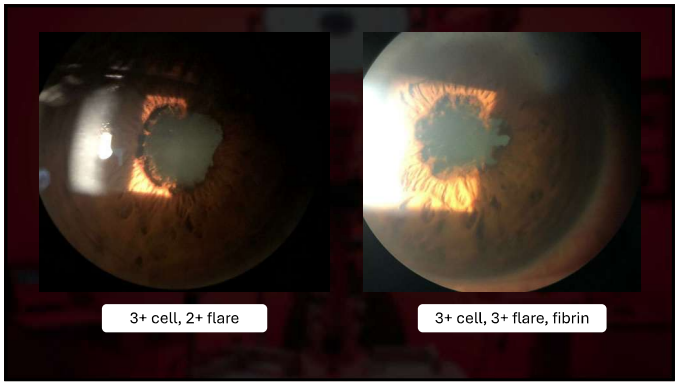
- 39 year old Hispanic male
- Chief complaint
  - Redness, pain, tearing, light sensitivity
  - Blurred vision x 3 weeks in both eyes
- Recently diagnosed with "bacterial conjunctivitis"
  - No improvement with ocufloxacin drops…

68

Clinical Exam

- VAs 20/50 OD, 20/70 OS
- IOPs 11 / 15mmHg
- Pupils Irregular, poorly reactive
- EOMs Full

69



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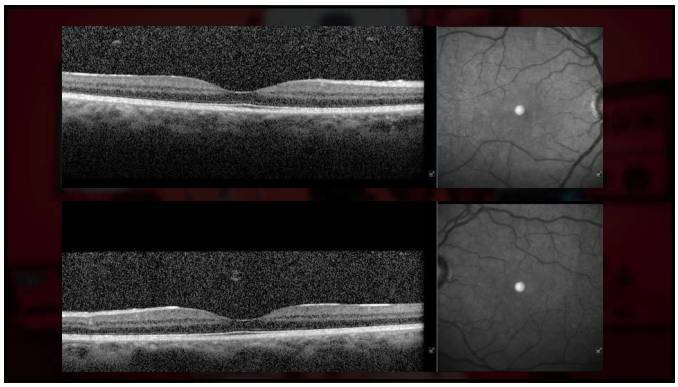


71

More testing?

72

Review of systems

- **(+) Some back pain after work**
- **(+) Coughing, but only with allergies**
- (-) Joint pain
- (-) Oral ulcers, skin rashes
- (-) Nausea, diarrhea, bloating
- (-) Shortness or breath +/- exertion
- (-) Fever or chills
- (-) No recent travel / Sick contacts
- (-) Known hx of TB
- (-) History of STDs
- (-) Cats
- (-) Recent hospitalizations, no IV drug use
- (-) Recent trauma / surgery
- (-) Autoimmune conditions, no family history of such

73

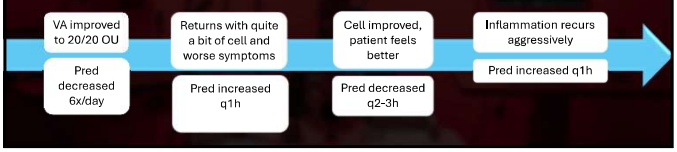
Next steps?

- Uveitis labs
  - CBC/diff, Quantiferon G, FTA, RPR, ANCA, ACE, lysozyme, RF, HLA B27
- Prednisolone q2h
- Atropine BID
- Ibuprofen PRN

74

Over the next month

- Labs return normal
  - CBC/diff, Quantiferon G, FTA, RPR, ANCA, ACE, lysozyme, RF, HLA B27
- Next few follow up visits…



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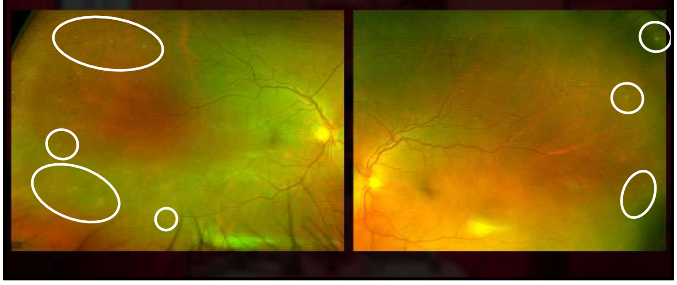
See anything weird?



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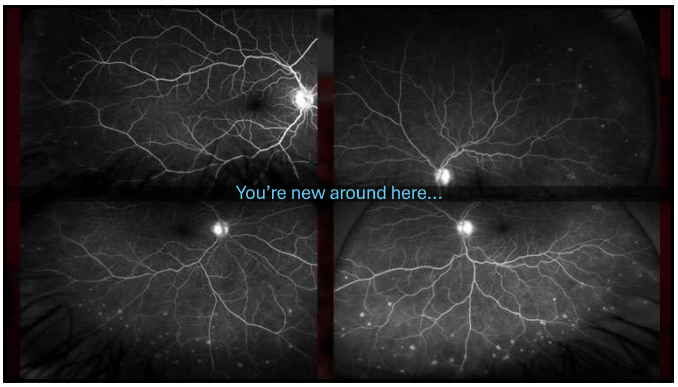

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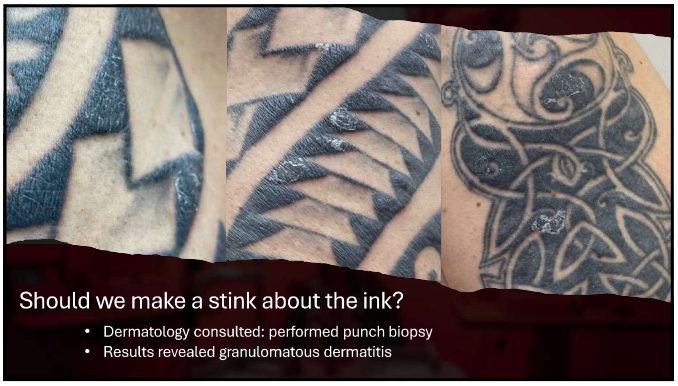


Should we make a stink about the ink?

- Dermatology consulted: performed punch biopsy
- Results revealed granulomatous dermatitis

78

Tattoo-associated uveitis

- Indurated papules or nodules, scaling, and itching over tattooed skin
- Skin biopsy reveals noncaseating granulomatous inflammation [1]
- Associated with black ink tattoos*
- 1 – 20 years after tattooing [2]
- Uveitis description
  - Bilateral anterior uveitis (80%)
  - Panuveitis (20%) [2]

1. Ostheimer TA, Burkholder BM, Leung TG, Butler NJ, Dunn JP, Thorne JE. Tattoo-associated uveitis. Am J Ophthalmol. 2014;158(3):637-643.e1. 2. Kluger N. Tattoo-associated uveitis with or without systemic sarcoidosis: a comparative review of the literature. J Eur Acad Dermatol Venereol. 2018;32(11):1852-1861.

79

You have some nerve

82

Tattoo-associated uveitis + ...Sarcoidosis?

- Sarcoidosis
  - Multisystem granulomatous inflammatory disease
    - Lungs, liver, lymphatic system, skin, eyes, etc
  - Diagnostic studies
    - ACE, serum lysozyme, WBC, serum calcium
    - Hepatic and renal function
    - Chest Xray, chest CT
    - And more

32yo male with tattoo-associated uveitis before (top) and after (below) systemic treatment[1].

1. Carvajal Bedoya G, Caplan L, Christopher KL, Reddy AK, Ifantides C. Tattoo Granulomas With Uveitis. J Investig Med High Impact Case Rep. 2020 Jan-Dec;8:2324709620975968. doi: 10.1177/2324709620975968.

80

- 36 year old Hispanic male
- Chief complaint
  - Severe eye pain with tearing and photophobia
  - Started after getting dust in eyes 1 week ago
    - Has irrigated his eyes multiple times without improvement
- Medical history
  - Hypertension

83

Tattoo-associated uveitis

- Treatment[1]
  - Topical steroids + cycloplegics
  - Oral prednisone
  - Oral immunomodulatory therapies
  - Resection of tattoo[2]
- Our patient
  - Quiet on methotrexate 15mg/week
  - Prednisone 5 mg/day
  - Folic acid supplement daily

Surgical resection of tattoo, before and after
www.visakhaskinclinic.com

1. Kluger N. Tattoo-associated uveitis with or without systemic sarcoidosis: a comparative review of the literature. J Eur Acad Dermatol Venereol. 2018;32(11):1852-1861. 2. H. Rorsman, E. Brehmer-Andersson, I. Dahlquist, *et al.* Tattoo granuloma and uveitis. Lancet, 294 (7610) (1969), pp. 27-28

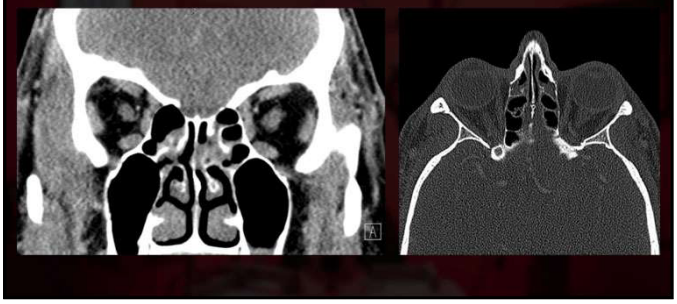
81

Exam findings

- VAs 20/15 OU
- IOPs 13 / 14 mmhg
- Pupils Normal
- EOMs Full, pain on eye movement
- Anterior
  - Trace conjunctival injection OU
- Posterior
  - Normal

84

WWYD?



85

3 days later…

- Severe eye pain and photophobia
- Acute vision loss that morning

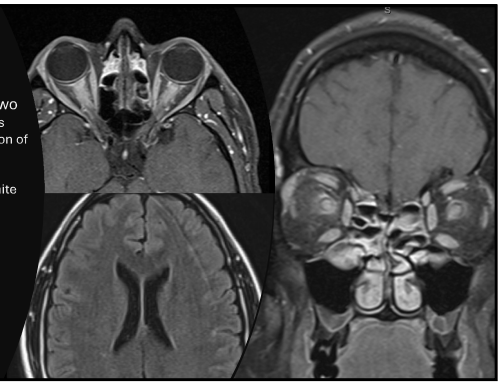
- Visual acuity: NLP OD, 20/400 OS (!)
- Pupils
  - Sluggish, minimally reactive OD
  - No APD appreciable

- Bilateral mild nerve edema

86

MRI brain & orbit w/wo

- Bilateral optic neuritis
- Extensive inflammation of nerve sheath (perineuritis)
- No periventricular white matter lesions



87

Bilateral optic neuritis

- **Typical**
  - Young, female, unilateral, mild VA reduction, retrobulbar
  - Causes
    - Isolated episode, multiple sclerosis
- **Atypical**
  - Bilateral, extensive nerve and/or chiasmal involvement, significant nerve edema, severely reduced vision
  - Causes
    - Infectious (syphilis, tuberculosis, lyme, bartonella, herpes, HIV)
    - Other demyelinating (Neuromyelitis optica / NMO, Myelin oligodendrocyte glycoprotein / MOG)

88

Further testing…

Result	Study
Normal	CBC, CMP, ACE, Quantiferon, ANCA, ACE, RPR
Positive	FTA
Pending	MOG, NMO (AQP4-IgG)

- Positive treponemal + negative non-treponemal
  1. Prior treated syphilis
  2. Untreated syphilis
  3. False positive treponemal test

- Patient referred for ID consult and treatment for possible neurosyphilis

89

MOG-IgG disease

- CNS demyelinating disorder[1]
  - Transverse myelitis
  - Brainstem encephalitis
  - Encephalomyelitis
    - Fever
    - Headache
    - Vomiting
    - Paresis
    - Seizure
    - Coma
    - Mental status alteration

Transverse myelitis in MOG-IgG myelitits[2]

1. Hamid SHM, et al., Seizures and Encephalitis in Myelin Oligodendrocyte Glycoprotein IgG Disease vs Aquaporin-4 IgG Disease. JAMA Neurol. 2018; 75(1): p. 65–71. 2. Dubey D, Pittock SJ, Krecke KN, Morris PP, Sechi E, Zalewski NL, Weinshenker BG, Shosha E, Lucchinetti CF, Fryer JP, Lopez-Chiriboga AS, Chen JC, Jitprapaikulsan J, McKeon A, Gadoth A, Keegan BM, Tillema JM, Naddaf E, Patterson MC, Messacar K, Tillel KL, Flanagan EP. Clinical, Radiologic, and Prognostic Features of Myelitis Associated With Myelin Oligodendrocyte Glycoprotein Autoantibody. JAMA Neurol. 2019 Mar 1;76(3):301-309.

90

MOG-IgG associated optic neuritis

- Common presentation[1,2]
  - Relapsing disease (80-93%)
  - Bilateral optic neuritis (40%)
  - Optic nerve edema
  - Transverse myelitis, encephalitis can also occur
  - Slight female preponderance, teens to 40s
- Treatment strategy
  - IV corticosteroids +/- IVIG or plasmaphoresis in acute phase
  - Long term strategy employs immunosuppressives
    - Rituximab or mycofenolate mofetil[3]

1. Abel A, McClelland C, Lee MS. Critical review: Typical and atypical optic neuritis. Surv Ophthalmol. 2019;64(6):770-779. 2. J.J. Chen, E.P. Flanagan, [illegible] Myelin Oligodendrocyte Glycoprotein Antibody (MOG)-IgG-positive optic neuritis: Clinical characteristics, radiological clues and outcome. Am J Ophthalmol. 195 (2018), pp. 5-15. 3. Hamid [illegible] et al. Myelin Oligodendrocyte Glycoprotein IgG Disease vs Aquaporin 4 IgG Disease. JAMA Neurol. 2018; 75(1): p. 65–71.

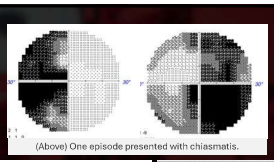
91

A real "Pro"

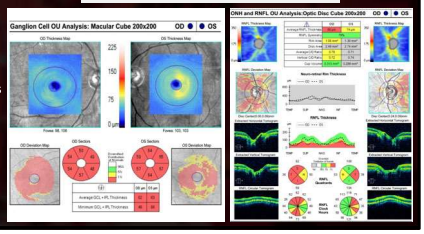
94

Back to our patient..

- 4 episodes of ON in 6 months
  - Even while on 60mg prednisone!
  - Vision loss ~20/400 to NLP
  - Multiple courses of IV steroids
- Current management with IVIG infusion every 4-6 weeks
  - Relapse rate lower than with rituximab, mycophenolate mofetil, azathioprine



(Above) One episode presented with chiasmatis.



92

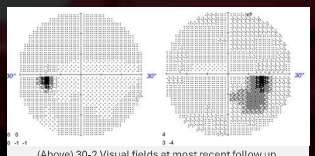
75 yo female with blurred vision and pain OD

- Eye pain for 1 week, went to urgent care and given "eye pain drop"
- Presented to her local ophthalmologist, BCL removed, referred to BPEI ER
- Rapid decline in vision with photophobia since 3 days prior
- History
  - S/p PKP OU, OD 2x with failure of 2nd graft at 18 years
  - s/p SK OD (9/4/19)
  - s/p Boston Type 1 Keratoprosthesis with PPV and IOL removal right eye (9/13/23)

95

Back to our patient

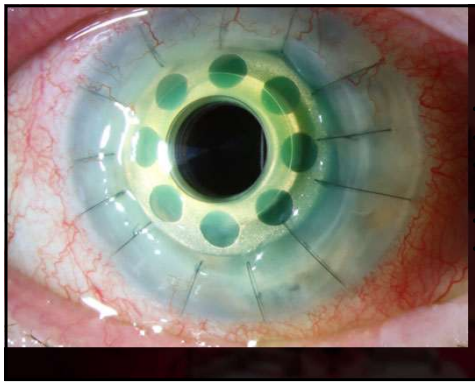
- 4 episodes of ON in 6 months
  - Even while on 60mg prednisone!
  - Vision loss ~20/400 to NLP
  - Multiple courses of IV steroids
- Current management with IVIG infusion every 4-6 weeks
  - Relapse rate lower than with rituximab, mycophenolate mofetil, azathioprine



(Above) 30-2 Visual fields at most recent follow up.
Visual acuity is 20/20 OU.

Don't get lost in the MOG fog!!

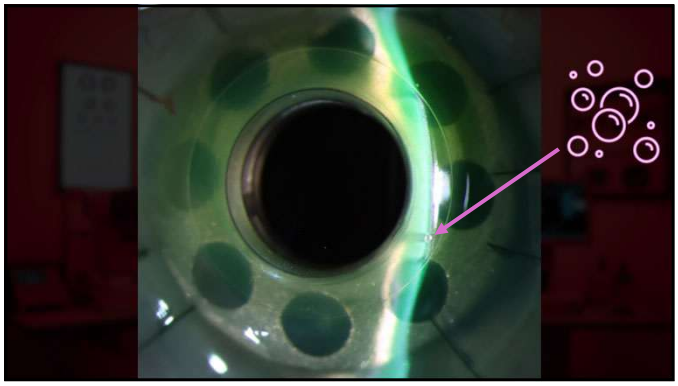
93



Right eye:

- VA 20/800
- IOP: palpation wnl
- No APD by reverse
- 4+ cell posteriorly
- No fundus view

96



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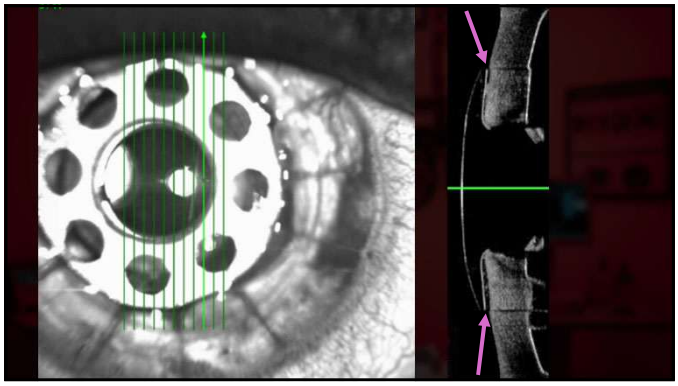

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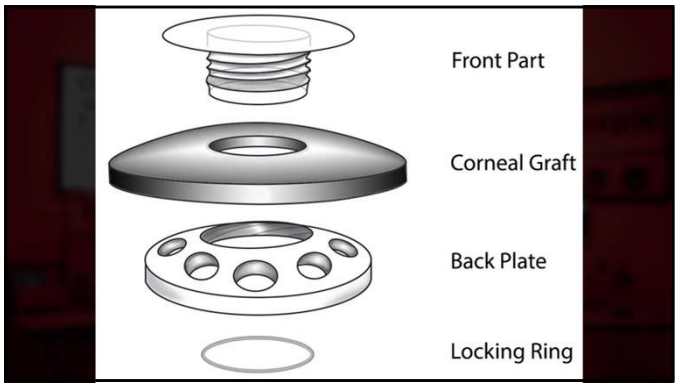

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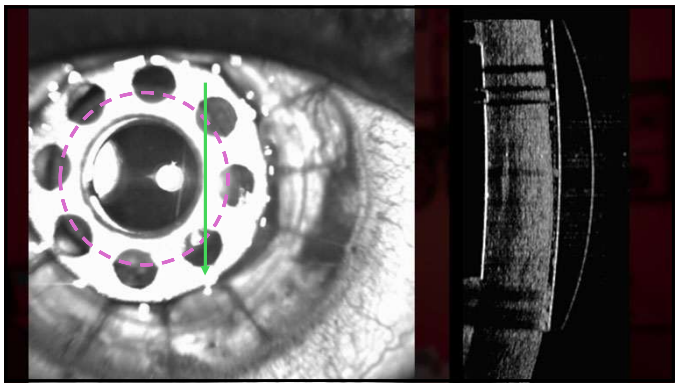

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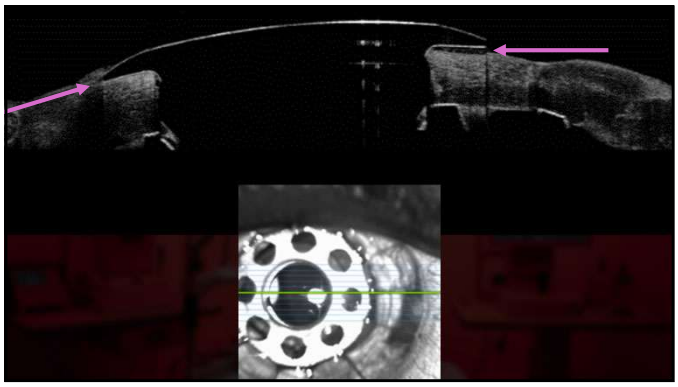

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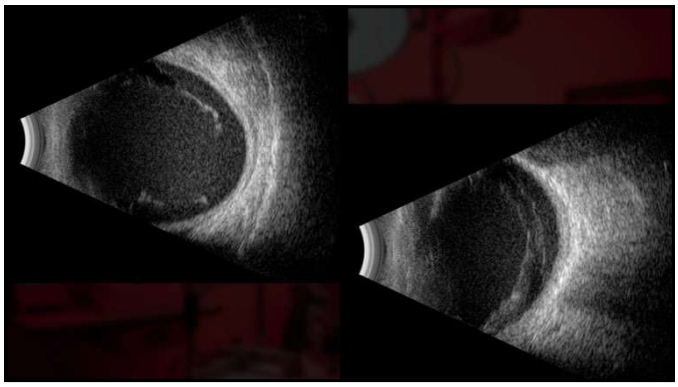

102

Endophthalmitis

- Signs & Symptoms
  - Anterior chamber reaction
  - Progressive vitritis
  - Ciliary flush
  - Pain
  - Photophobia
  - Blurred vision
- 0.04% prevalence in US cataract surgeries*
- Acute: <6 weeks
- Delayed / Chronic: >6 weeks
  - Usually granulomatous KPs, deposits on IOL
- Gram (+) > Gram (–) > fungal
  - Gram (-) more virulent!

Pershing S, Lum F, Hsu S, et al. Endophthalmitis after cataract surgery in the United States: a report from the Intelligent Research in Sight Registry, 2013-2017. Ophthalmology. 2020;127(2):151-8.

103

Endophthalmitis in KPros

- Incidence 1.7% per procedure-year
  - Recurrence 6% per procedure year
- 44% culture positive
  - Gram positive 88%
- Risk factors
  - Intrinsic: chronic steroid use, severe ocular surface disease, aphakia
  - Added: History ocular burn, infectious keratitis, corneal melt, and contact lens wear*

Bostan C, Nayman T, Szigiato AA, Morfeq H, Hariss-Dagher M. Endophthalmitis in Eyes With the Boston Type I Keratoprosthesis: Incidence, Recurrence, Risk Factors, and Outcomes. Cornea. 2021

104

Endophthalmitis in KPros

- Risk factors
  - As in our patient, an **interface gap** between front optic plate and corneal tissue also increases risk of endophthalmitis*
- Risk reduction strategies
  - Chronic bandage contact lens wear
  - Prophylactic topical antibiotics
  - Occasional betadine rinse

Zarei-Ghanavati S, Betancurt C, Mas AM, Wang J, Perez VL. Ultra high resolution optical coherence tomography in Boston type I keratoprosthesis. J Ophthalmic Vis Res. 2015 Jan-Mar;10(1):26-32.

105

Management

- Vitreous tap and inject (vancomycin, ceftazidime)
- Topical fortified vancomycin, tobramycin 6x/day
- Topical prednisolone 2x/day
- 1 day follow up: VA 20/80
- 2 day follow up: VA 20/40 (baseline, great fundus view)
- 5 day follow up: VA 20/40
  - No growth from tap

106

Outcome

- Outcome: 20/40 (baseline VA)

107

Those drusen are a doozy

108

- 74 year old man
- Blurred vision / scotoma OS x 2 weeks
  - No pain or photophobia
- 3rd opinion
  - 1st doctor: nothing is wrong with eyes
  - 2nd doctor: macular degeneration

109

109

Medical history

- Hypertension
- Diffuse Large B-Cell Lymphoma
  - Started with altered mental status
  - S/p chemotherapy
  - Plan for stem cell transplant…
- Prostate Cancer with metastasis to bone
  - Treated with prostatectomy, hormone therapy

112

112

- 74 year old man
- Blurred vision / scotoma OS x 2 weeks
  - No pain or photophobia
- 3rd opinion
  - 1st doctor: nothing is wrong with eyes
  - 2nd doctor: macular degeneration

110

110

113

113

Ophthalmic Vitals

VA	20/25 OD, 20/60 OS
IOP	17/15mmHg
Pupils	Normal, no APD
EOMs	Full, no diplopia

111

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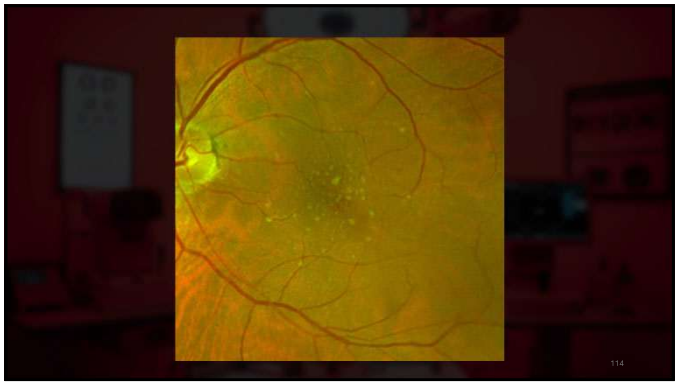

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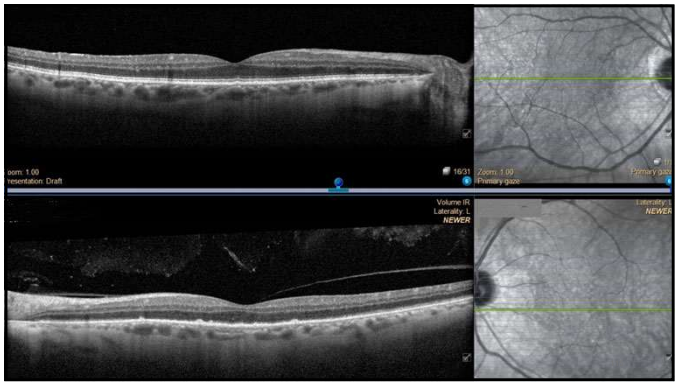

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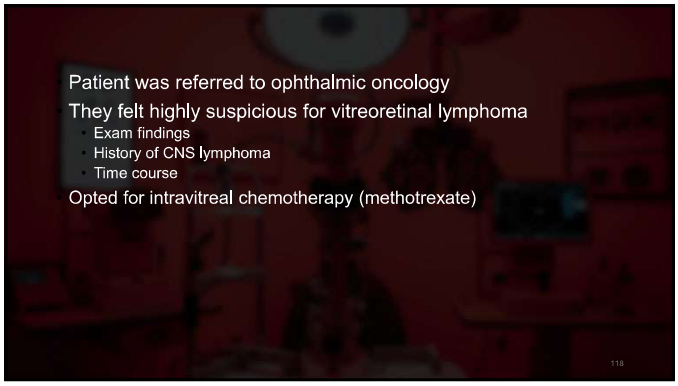

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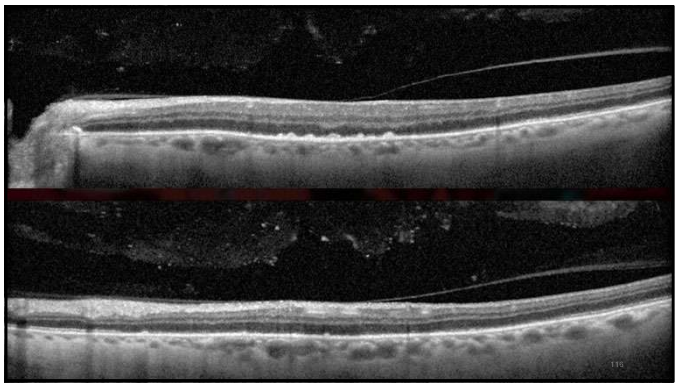

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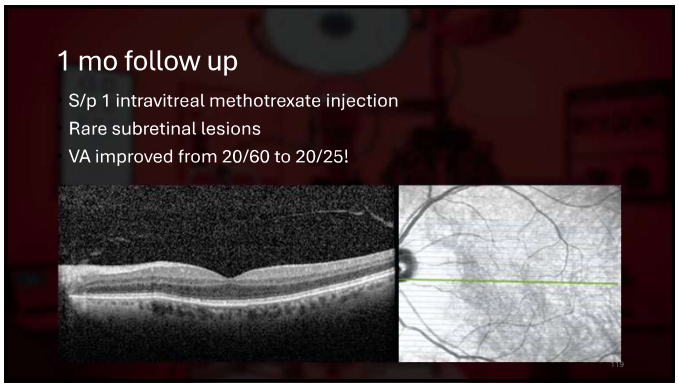

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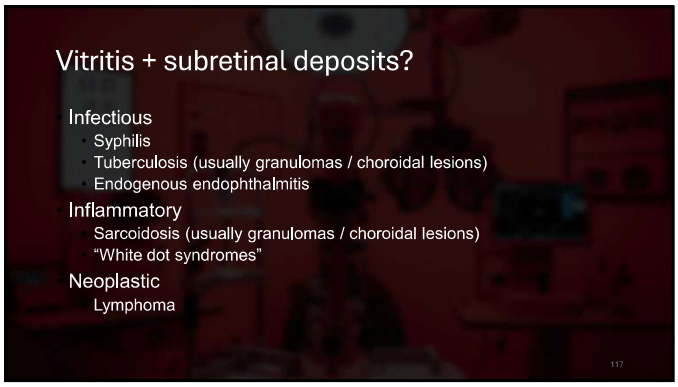

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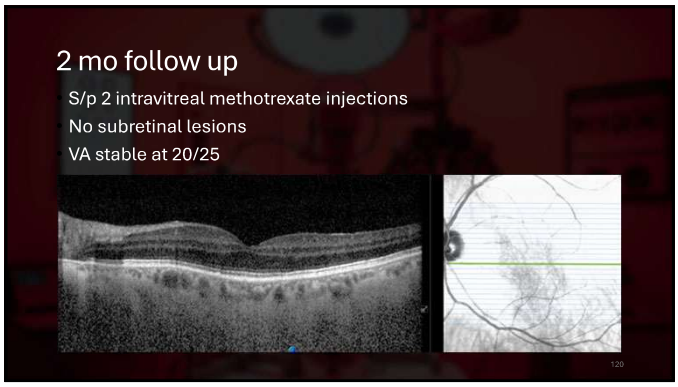

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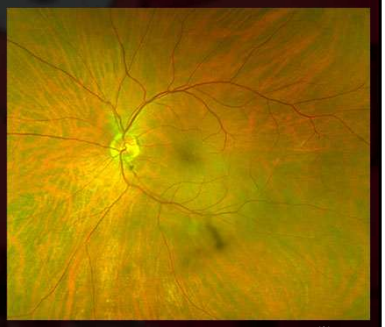
3 month follow up

- Patient cleared for and underwent bone marrow transplant
- VA stable at 20/20
- Follows q3 months



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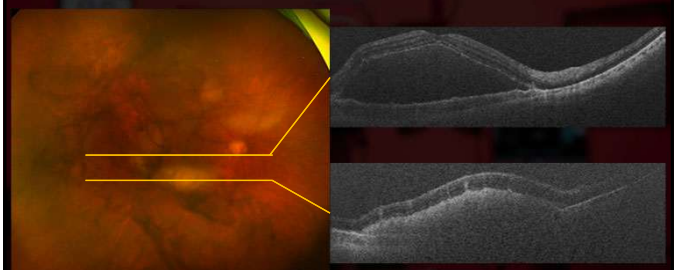
71 year old male with blurred vision OD



124

124

Ophthalmic lymphoma

- Orbital lymphoma
- Conjunctival lymphoma
- Intraocular lymphoma
  - Primary vitreoretinal lymphoma
  - Secondary intraocular lymphoma
  - Primary uveal lymphoma

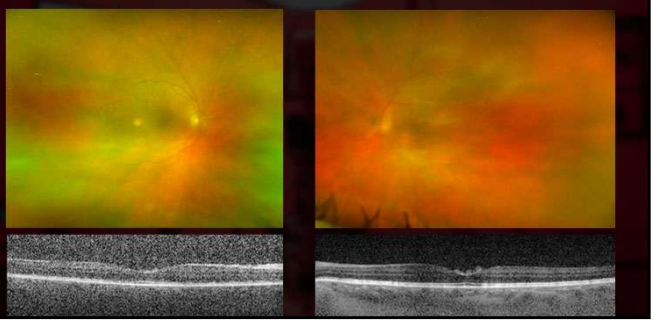
122

122

- 85yo man
- Sudden loss of vision superonasal quadrant OS x1 day
- Med Hx:
  - Hx atrial fibrillation
  - S/p mitral valve repair and Watchman procedure 2001
  - S/p AV node ablation, cardiac pacemaker 2023
  - Currently on clopidogrel (Plavix) + ASA
    - Taken off rivaroxaban (Xarelto) after severe bleeding/epistaxis (nasal) 2024

125

73 year old female with blurred vision OU



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Ophthalmic Vitals

- VA 20/20 OD, 20/20 OS
- IOP 16/15mmHg
- Pupils Normal, no APD
- EOMs Full

126

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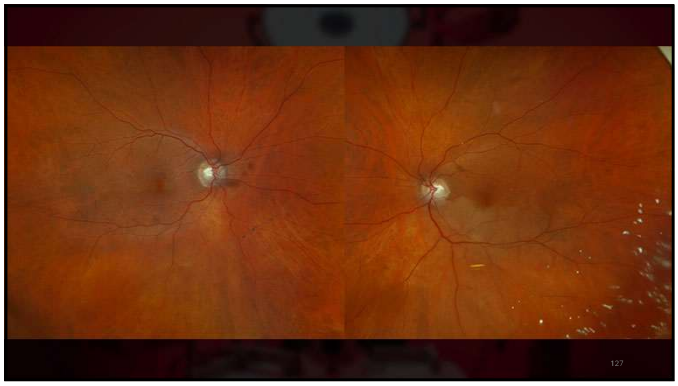

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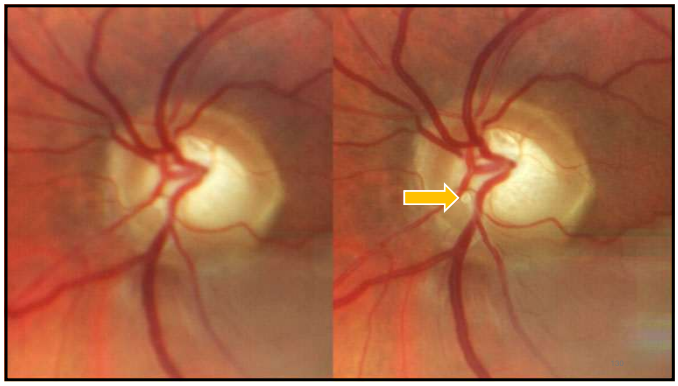

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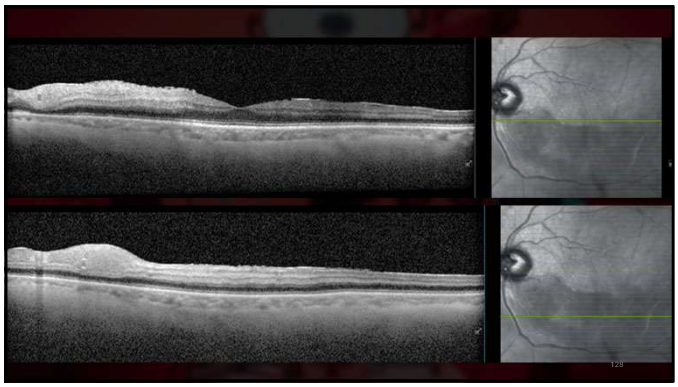

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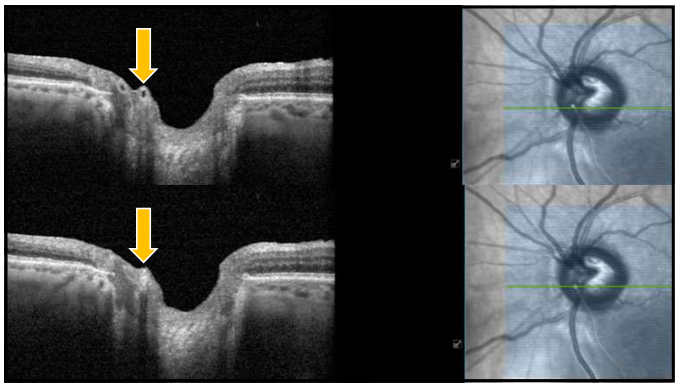

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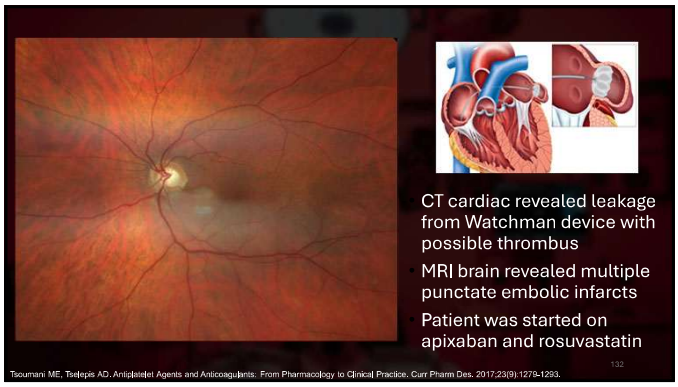


132

Embolic

- Is this acute or not?
  - Based on Last Known Well (LKW) time
    - tPA window: 4.5 hours
    - Acute: 24 hours
    - *Limb ischemia: <2 weeks (?)*
- < 24 hours, stroke protocol is activated
- If >24 hours w/stable ABCs, TIA (resolved symptoms)
  - Vitals + labs, consider CT head and EKG at discretion of physician on call

133

133

Thank you!

136

Stroke Protocol (*example*)

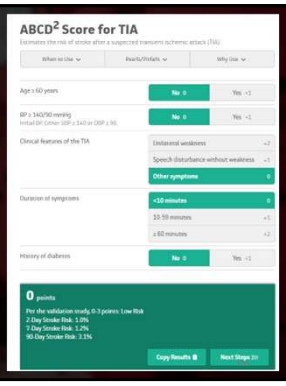
- Eval by triage nurse (immediately upon arrival)
- Eval by ED physician (within 10 minutes)
- Vitals + labs
  - BP, glucose, CBC, INR, PTT, troponin, BMP
- CT head w/o contrast (within 20 minutes)
- 12-lead EKG (within 45 minutes)
- Stroke team eval within 30 minutes
  - NIHSS (MDcalc.com)

134

134

When to send?

- If within 24 hours of RAO/VF loss (not otherwise explained)…
  - Send to ED immediately
- If over 24 hours onset…
  - Consider expedited workup within 1 week
    - Symptoms resolved? TIA - use ABCD² (MDcalc.com)
    - Don't forget about GCA labs (not part of stroke work up)
- If you see an emboli, but patient is asymptomatic…
  - Consider expedited workup within 1 week



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